

**Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services**

**STATEMENT OF BASIS**

**PPG Industries, Inc.  
Lake Charles Complex – Waste Recovery Unit  
Lake Charles, Calcasieu Parish, Louisiana  
Agency Interest Number: 1255  
Activity Number: PER20080015  
Proposed Permit Number: 2216-V1**

**I. APPLICANT**

**Company:**

PPG Industries, Inc.  
P. O. Box 1000  
Lake Charles, Louisiana 70602-1000

**Facility:**

Lake Charles Complex – Waste Recovery Unit  
1300 PPG Dr.  
Lake Charles, Calcasieu Parish, Louisiana  
Approximate UTM coordinates are 472.5 kilometers East and 3,343.5 kilometers North in Zone 15

**II. FACILITY AND CURRENT PERMIT STATUS**

PPG Industries, Inc.'s (PPG's) Lake Charles Complex is located at the intersection of I-10 and Loop I-210 near Westlake, Louisiana. The facility consists of three highly integrated business areas as described below.

- **Chlor/Alkali:** In this area, chlorine, caustic, and hydrogen are produced through the electrolysis of brine using diaphragm and membrane technology.
- **Derivatives:** In this area, chlorine is combined with ethylene and ethylene derivatives to produce chlorinated hydrocarbons and muriatic acid (hydrochloric acid).
- **Silicas:** In this area, sand is heated with either caustic or soda ash to produce sodium silicate, from which different grades of products are produced.

Electricity and steam required for the facility operations are produced in the Power/Utilities area. Transfer operations for raw materials and products involve the transfer to and from trucks, ships, barges, tank cars, hopper cars, and drums. Raw materials and products are also transferred via pipeline.

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The whole complex is organized into the following permitting units/areas: VC Production, Power/Utilities, Silicas, Complex Support Facilities, Chlor/Alkali Plant, Mercury Recovery Unit, Membrane Unit, Derivatives Docks, Derivatives Shipping, Derivatives Plant Common Sources, Greater EDC, Waste Recovery Unit, Per/Tri, TE-2, and Incinerators Area.

The Lake Charles Complex is a designated Part 70 source. It is currently operating under the following Part 70 operating permits:

<b>Permit No.</b>	<b>Unit or Source</b>	<b>Date Issued</b>
2359-V1	Complex Support Facilities	07/05/2007
2206-V0	Derivatives Docks	06/29/2006 (AA 07/28/2009)
2270-V1	Per/Tri Unit	10/12/2009
2269-V2	Derivatives Plant Common Sources	07/28/2009
2231-V1	Mercury Recovery Unit	10/24/2007 (AA 01/29/2008)
3021-V1	Membrane Unit	10/12/2009
2085-V3	Silicas Unit	09/10/2009
897-V1	VC Production Unit	10/12/2009
2040-V2	Incinerators Area	05/22/2009
2695-V1	TE-2 Unit	07/28/2009
2350-V1	Greater EDC Unit	08/14/2009
2216-V0	Waste Recovery Unit	06/29/2004 (AA 11/14/2005)
2798-V1	Chlor/Alkali Plant	05/01/2009
2229-V1	Derivatives Shipping Facility	06/29/2006 (AA 07/28/2009)
2106-V2	Power/Utilities	03/20/2006 (AA 08/14/2009)

In addition, PSD Permits PSD-LA-642 (11/23/1999) and PSD-LA-637 (M-1) (5/24/2002, AA 7/28/2009)) and Acid Rain Permit 2646-IV1 (10/11/2006) were also issued to the complex.

### **III. PROPOSED PROJECT/PERMIT INFORMATION**

#### **Application**

A permit application, dated December 11, 2008, was submitted by PPG Industries, Inc. requesting a Part 70 operating permit renewal. Additional information dated December 18, 2008 was also received.

#### **Project**

There are no proposed construction, modification, or reconstruction activities being requested with this permit renewal. However, this permit renewal incorporates the following changes:

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- The process fugitive emissions from all process units of the Derivatives Plant have been consolidated and included in the permit for the Derivatives Plant Common Sources. Thus, the process fugitive emissions are removed from the permit for the Waste Recovery Unit.
- The PM<sub>10</sub> emission rates for the Cooling Tower 533G are updated based on the results of the recent study on the cooling towers in PPG's Lake Charles Complex.

**Proposed Permit**

Permit No. 2216-V1 will be a permit renewal of Part 70 Operating Permit No. 2216-V0, issued June 29, 2004, for the Waste Recovery Unit.

**Permitted Air Emissions**

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
PM <sub>10</sub>	0.05	1.38	+ 1.33
SO <sub>2</sub>	-	-	-
NO <sub>x</sub>	-	-	-
CO	-	-	-
VOC	0.02	0.02	-

**IV REGULATORY ANALYSIS**

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the permit.

**Prevention of Significant Deterioration**

PSD review is not required since there are no physical or operational changes associated with this permit renewal.

**MACT Requirements**

The referenced facility is subject to the requirements of 40 CFR Part 63, Subparts F and G. Detailed requirements are listed in the Specific Requirements Section of the permit.

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**Air Quality Analysis**

Emissions associated with the proposed project were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

**General Condition XVII Activities**

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rules. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the permit.

**Insignificant Activities**

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the permit.

**V. PERMIT SHIELD**

No permit shield is granted.

The application requested a permit shield to state that HON Subpart G supersedes NSPS Subparts Kb and NNN and compliance with HON Subpart constitutes compliance with LAC 33:III.Chapter 21 (2103, 2115, and 2147). Since HON Subpart G already indicates that it supersedes NSPS Subparts Kb and NNN, a permit shield for HON Subpart G superseding NSPS Subparts Kb and NNN is unnecessary. A permit shield to indicate that compliance with HON Subpart G constitutes compliance with LAC 33:III.2115 and 2147 is unnecessary either since Louisiana Regulation Code already indicates that these provisions (2115 and 2147) are not applicable or exempt for a source subject to the requirements of HON Subpart G. LDEQ has determined that a source shall comply with both LAC 33:III.2103 and HON Subpart G if both regulations are applicable. Therefore, no permit shield is granted.

**VI. PERIODIC MONITORING**

All monitoring requirements are presented in the Specific Requirements section of the permit.

**VII. GLOSSARY**

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51

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(including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

**Hydrogen Sulfide (H<sub>2</sub>S)** – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

**New Source Review (NSR)** – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

**Nitrogen Oxides (NO<sub>x</sub>)** – Compounds whose molecules consist of nitrogen and oxygen.

**Organic Compound** – Any compound of carbon and another element. Examples: Methane (CH<sub>4</sub>), Ethane (C<sub>2</sub>H<sub>6</sub>), Carbon Disulfide (CS<sub>2</sub>)

**Part 70 Operating Permit** – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

**PM<sub>10</sub>** – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

**Potential to Emit (PTE)** – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

**Prevention of Significant Deterioration (PSD)** – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

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Sulfur Dioxide (SO<sub>2</sub>) – An oxide of sulfur.

Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.